

Amendments to the Specification:

Please amend the paragraph beginning at page 10, line 8 as follows:

AI
Omt

A structure of the second lens of an objective lens for the optical pickup in the present embodiment is shown in Fig. 2. In Fig. 2, the second lens 16a is defined by a first surface, which has a shape of a center symmetric convex surface and which is an aspherical surface 21 on the light source side, a second surface 22, which has a shape of a center symmetric effective surface disposed on the opposite side of the first surface so as to be opposed thereto and which is disposed on a side of an optical disc, that is, on an exiting side, and a center symmetric cylindrical side surface 23, which crosses with the first surface (the first surface and the second surface ~~exist~~ exist in order from the incident side of the light). As shown in Fig. 2, when it is assumed that there would be a virtual lens portion 160 surrounded by a cylindrical surface 23a, which includes the first and second surfaces 21 and 22 and the cylindrical side surface 23, the second lens 16a is greatly decreased in volume in comparison with the virtual lens portion 160, because the second surface 22 with an effective diameter of the second lens 16a is reduced by an aspherical shape in step-wise of stairs at the outer circumference portion thereof. Here, the volume of the second lens 16a is determined so as to be less than that of a preformed glass ball having a center curvature radius of the first surface 21. Thus, press molding of the second lens 16a is possible by using a preformed ball having such radius. That is, in respect of a small paraxial curvature radius rA expressed by the following formula (2):

$$rA < \sqrt[3]{\frac{3}{4\pi} V_2} \quad (2)$$

AW
and
(wherein, V2 denotes the volume of the virtual lens portion 160 surrounded by the cylindrical surface including the first and second surfaces and the cylindrical side surface), which does not satisfy the foregoing formula (1), the reduced volume V1 for a molded glass objective lens is also set as expressed in the following formula (3):

$$\sqrt[3]{\frac{3}{4\pi}} V1 \leq rA \quad (3),$$

so that molding of a glass objective lens by glass pressing would be possible.

Please amend the paragraph beginning at the last line of page 15 as follows:

AW
In this comparison example, the center curvature radius of the third surface is 1.443 mm and the diameter of the preformed ball is 1.458 mm. This does not satisfy a limitation that the center curvature radius should be larger than the diameter of the preformed ball[[]]. Thus, it is theoretically possible to optically design a lens so as to have a good performance, but it is practically impossible to produce it by a ~~grass press~~ glass press. According to the invention, however, it is possible to use a preformed glass ball having a smaller diameter, so that freedom in optical design and production would be enhanced.
